

**FIG. 1**

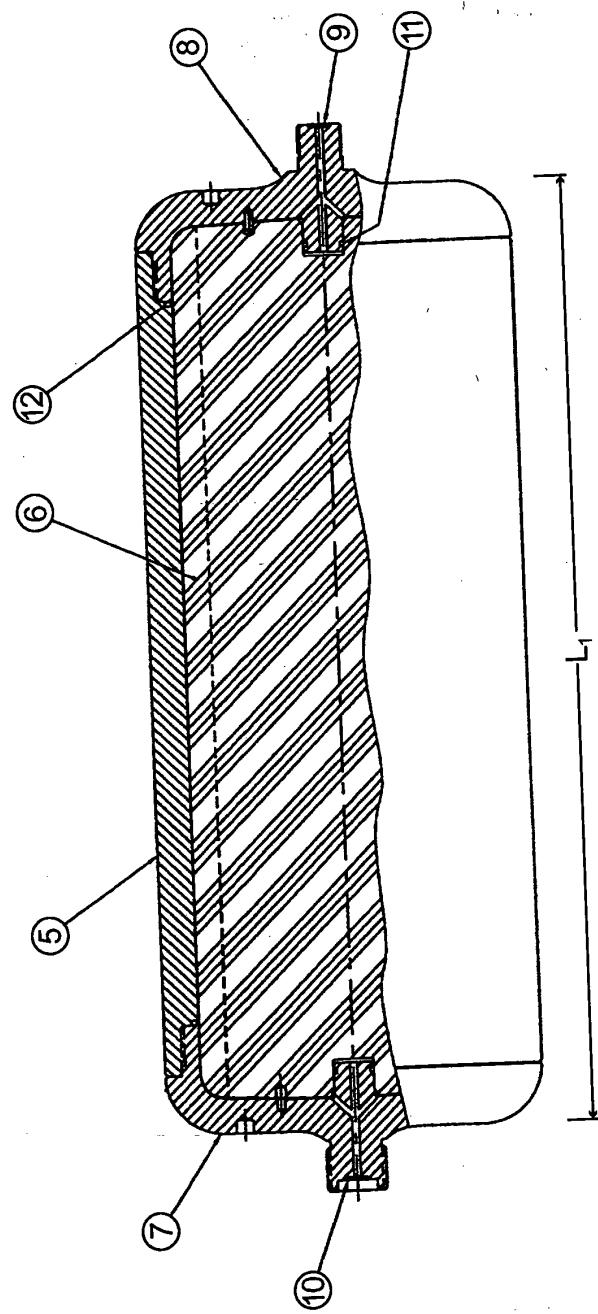


FIG. 2A

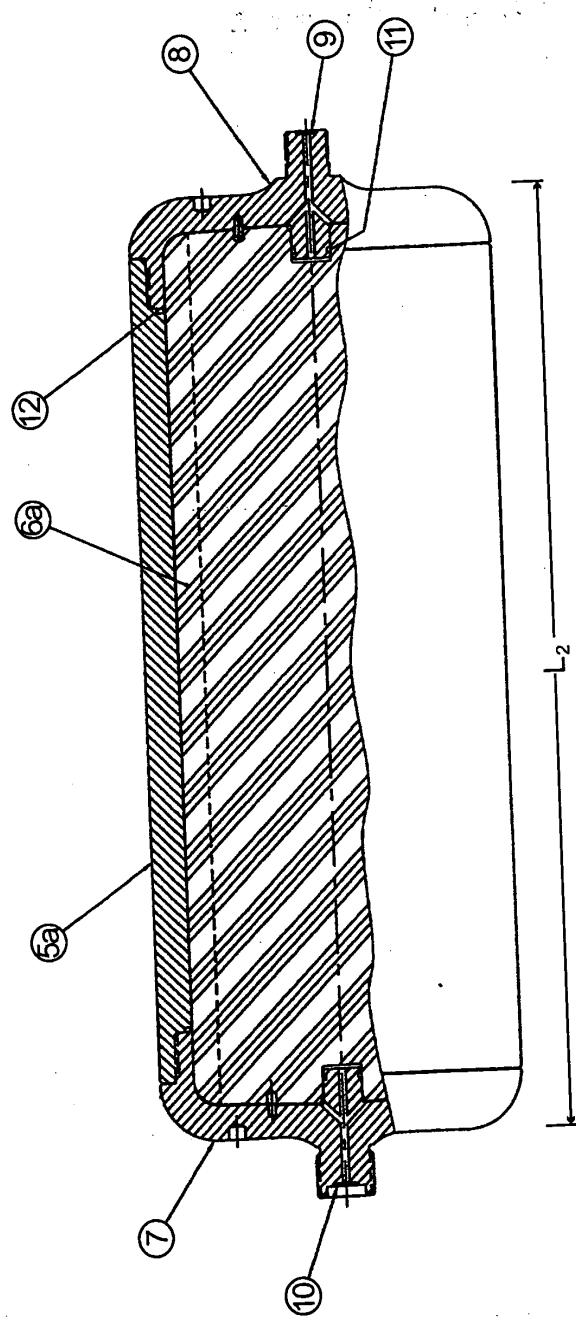
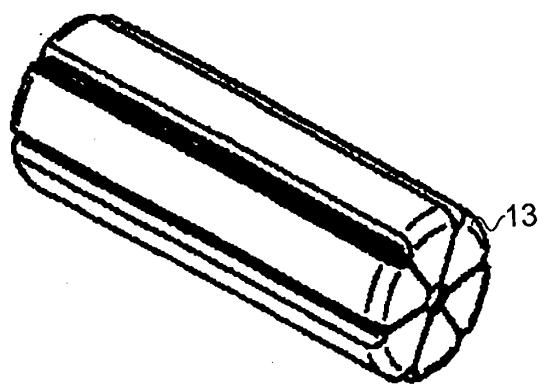
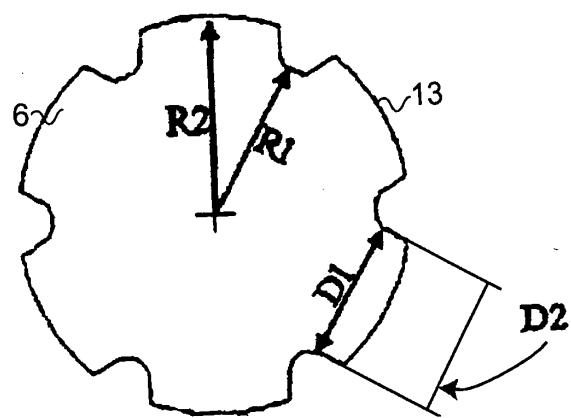


FIG. 2B



**FIG. 3A**

6 13



**FIG. 3B**

14 16 2 15

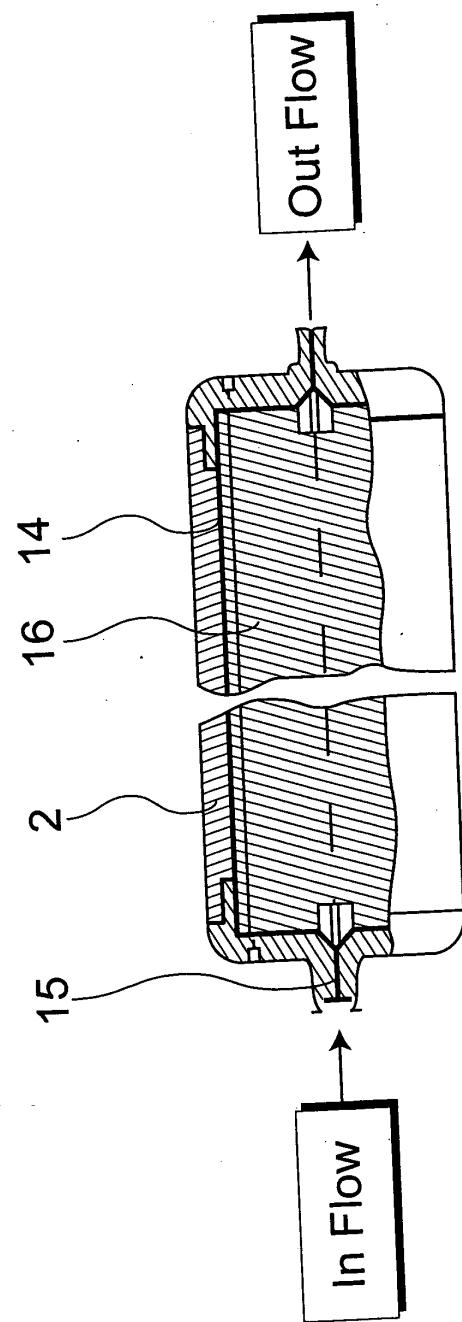
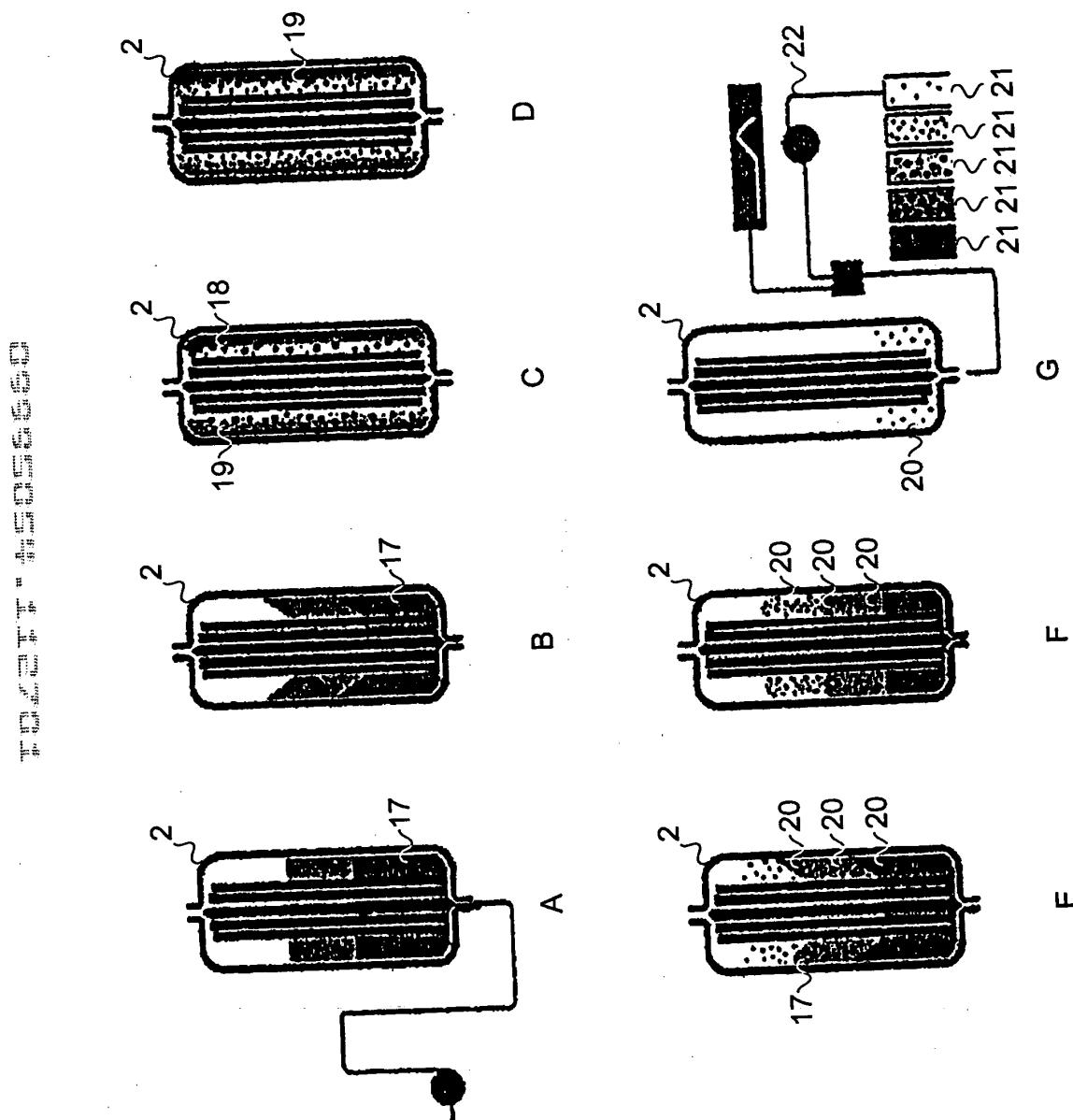
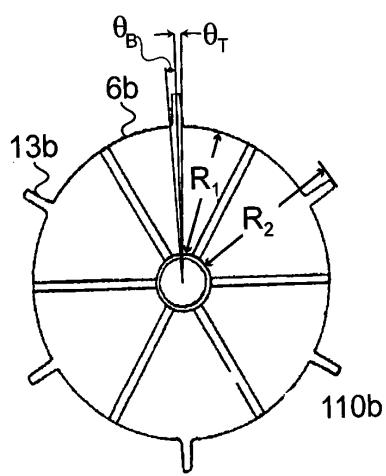


FIG. 4

FIG. 5



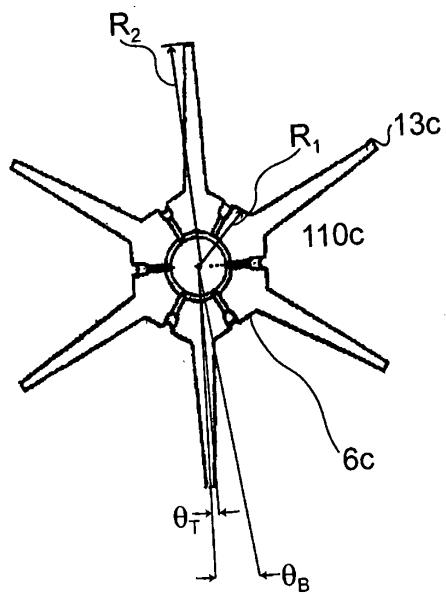


**FIG. 6**

Outer Radius of the Core in mm  
Inner Radius in mm  
Angle formed by one-half the top fin surface in radians  
Angle formed by one-half the bottom fin surface in radians  
Length of the Core in mm

R2	Outer Radius of the Core in mm 2.593 inches
R1	Inner Radius in mm 2.145 inches
Theta-T	Angle formed by one-half the top fin surface in radians 0.91527174 degrees
Theta-B	Angle formed by one-half the bottom fin surface in radians 0.60780781 degrees
L	Length of the Core in mm 764.3
V2	Total volume of the Cylinder: 10455661.2 mm <sup>3</sup>
V1	Total volume of the Core trunk: 7124023.0 mm <sup>3</sup>
W1	Fin Volume Component 1: 8470.4 mm <sup>3</sup>
C1	Length of the Chord formed for W2: 0.6 mm
W2	Fin Volume Component 2: 2543.2 mm <sup>3</sup>
	Available Volume 323247.7 mm <sup>3</sup>
D1	Lateral distance across fin bottom in mm 0.114 inches (D2+0.031')
D2	Lateral distance across fin top in mm 0.083 inches
2.1	Intermediate Terms
0.0160	0.915272 degrees
0.0266	1.52308 degrees
0.0106	0.607808 degrees
-1.5366	-88.04247 degrees
	11.5189 -0.3937

**FIG. 7**



**FIG. 8**

168.0 R2  
160.0 R1  
Theta-T  
Theta-B  
L

Outer Radius of the Core in mm  
Inner Radius in mm  
Angle formed by one-half the top fin surface in radians  
Angle formed by one-half the bottom fin surface in radians  
Length of the Core in mm

2.598 inches  
0.825 inches  
1.10275822 degrees  
0.619232 degrees  
7.6119838 degrees

Total volume of the Cylinder:  
10316669.4 mm<sup>3</sup>  
Total volume of the Core trunk:  
1040325.2 mm<sup>3</sup>  
28415.5 mm<sup>3</sup>  
Fin Volume Component 1:  
2.8 mm  
Length of the Chord formed for W2:  
47172.1 mm<sup>3</sup>  
Fin Volume Component 2:  
566 mL

Available Volume  
0.100 inches

D1 Lateral distance across fin bottom in mm  
D2 Lateral distance across fin top in mm  
2.5  
0.0192  
0.1521  
0.1329  
-1.5285

10317 mL  
1040 mL  
341 mL  
0.110 inch  
566 mL



	Outer	Inner
Total volume of the Cylinder:	10316669.4 mm <sup>3</sup>	1040325.2 mm <sup>3</sup>
Total volume of the Core trunk:	1040 mL	3186.742 mL
Fin Volume Component 1:	341 mL	
Length of the Chord formed for W2:	0.110 inch	
Fin Volume Component 2:	566 mL	
Available Volume	0.100 inches	
	(D2+0.031")	16.3700"

Intermediate Terms

Calculated Theta-T in radians	1.102758 degrees
Calculated (Theta-T+Theta-B) in radians	8.714742 degrees
Calculated Theta-B in radians	7.611984 degrees
Calculated fin Wall Angle in radians	-87.57776 degrees

FIG. 9

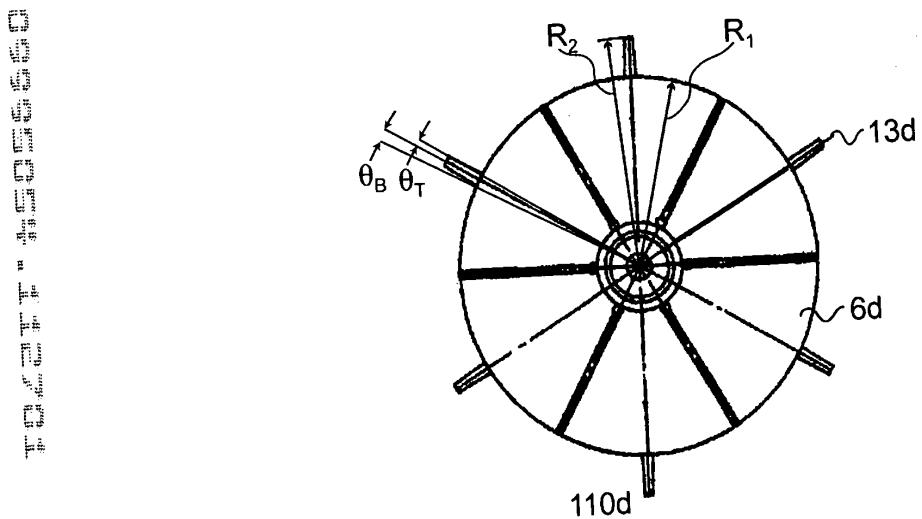


FIG. 10

6.0	R2	Outer Radius of the Core in mm	2.593 inches
5.6	R1	Inner Radius in mm	2.145 inches
5.6	Theta-T	Angle formed by one-half the top fin surface in radians	0.91527174 degrees
5.6	Theta-B	Angle formed by one-half the bottom fin surface in radians	0.60780781 degrees
762.7	L	Length of the Core in mm	
	V2	Total volume of the Cylinder:	10433770.0 mm <sup>3</sup>
	V1	Total volume of the Core trunk:	7109107.3 mm <sup>3</sup>
	W1	Fin Volume Component 1:	8452.7 mm <sup>3</sup>
	C1	Length of the Chord formed for W2:	0.6 mm
	W2	Fin Volume Component 2:	2337.9 mm <sup>3</sup>
	D1	Lateral distance across bottom fin in mm	0.114 inches
2.1	D2	Lateral distance across fin top in mm	0.083 inches
			(D2+0.031") 0.213256
		Calculated Theta-T in radians	0.0160 0.915272 degrees
		Calculated (Theta-T+Theta-B) in radians	0.0266 1.52308 degrees
		Calculated Theta-B in radians	0.0106 0.607808 degrees
		Calculated fin Wall Angle in radians	-1.5366 -88.04247 degrees
			11.5189 -0.3937
			Intermediate Terms
			0.999
			0.999

FIG. 11

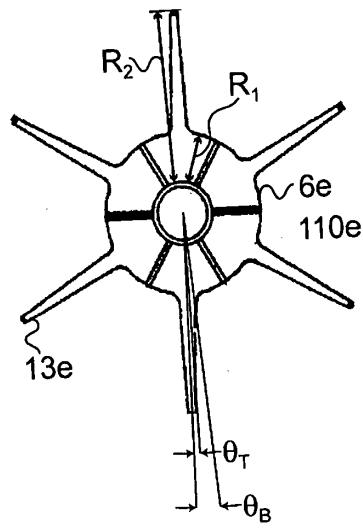
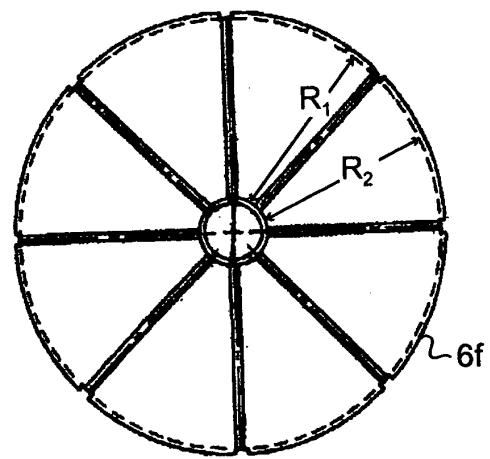


FIG. 12

660  
26  
12  
10190  
660  
26  
12  
10190

R2	Outer Radius of the Core in mm	2.593 1.052 inches	Outer 36192.22	Inner 5934.284
R1	Inner Radius in mm	0.09217 0.0844 inches		
Theta-T	Angle formed by one-half the top fin surface in radians	1.2461381 degrees		
Theta-B	Angle formed by one-half the bottom fin surface in radians	4.83798852 degrees		
L	Length of the Core in mm	764.3		
V2	Total volume of the Cylinder:	10456661.2 mm <sup>3</sup>	10456 mL	
V1	Total volume of the Core trunk:	1714370.5 mm <sup>3</sup>	1714 mL	
W1	Fin Volume Component 1:	30257.9 mm <sup>3</sup>	363 mL	
C1	Length of the Chord formed for W2:	2.3 mm	0.089 inch	
W2	Fin Volume Component 2:	33818.5 mm <sup>3</sup>	406 mL	44.28434 0.035809
	Available Volume	572.5 mm <sup>3</sup>	68.0 mL	513682
D1	Lateral distance across fin bottom in mm	0.223 inches	(D2+0.031")	
D2	Lateral distance across fin top in mm	0.113 inches		
				Intermediate Terms
2.9	Calculated Theta-T in radians	0.0217	1.246138 degrees	0.999
	Calculated (Theta-T+Theta-B) in radians	0.1062	6.084127 degrees	0.978
13	Calculated Theta-B in radians	0.0844	4.837989 degrees	
	Calculated fin Wall Angle in radians	-1.5352	-87.96252 degrees	-1.397
				39.2684

FIG. 13



**FIG. 14**

66.0	R2	Outer Radius of the Core in mm	2.598	Inches
66.0	R1	Inner Radius in mm	2.561	Inches
66.0	Theta-T	Angle formed by one-half the top fin surface in radians	0	degrees
66.0	Theta-B	Angle formed by one-half the bottom fin surface in radians	0	degrees
764.3	L	Length of the Core in mm		
	V2	Total volume of the Cylinder:	10455661.2	mm <sup>3</sup>
	V1	Total volume of the Core trunk:	10159968.6	mm <sup>3</sup>
	W1	Fin Volume Component 1:	0.0	mm <sup>3</sup>
	C1	Length of the Chord formed for W2:	0.0	mm
	W2	Fin Volume Component 2:	0.0	mm <sup>3</sup>
		Available Volume	0.000	mm <sup>3</sup>
0.0	D1	Lateral distance across fin bottom in mm	0.000	inches
0.0	D2	Lateral distance across fin top in mm	0.000	inches
			(D2+0.031")	0.0000
				Intermediate Terms
		Calculated Theta-T in radians	0.0000	0 degrees
		Calculated (Theta-T+Theta-B) in radians	0.0000	0 degrees
		Calculated Theta-B in radians	0.0000	0 degrees
		Calculated fin Wall Angle in radians	#DIV/0!	degrees
			0.9398	0

FIG. 15

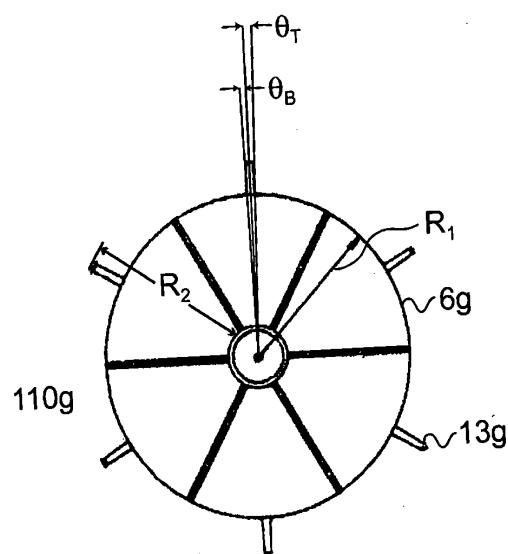


FIG. 16

36.0	R2	Outer Radius of the Core in mm	2.598	inches	5.196	
35.5	R1	Inner Radius in mm	2.145	inches	4.29	
37.5	Theta-T	Angle formed by one-half the top fin surface in radians	0.160		0.91527174	degrees
382.1	Theta-B	Angle formed by one-half the bottom fin surface in radians	0.00006		0.6074527	degrees
	L	Length of the Core in mm				
	V2	Total volume of the Cylinder:	5227135.7	mm <sup>3</sup>	5227	mL
	V1	Total volume of the Core trunk:	3563198.9	mm <sup>3</sup>	3563	mL
	W1	Fin Volume Component 1:	4230.4	mm <sup>3</sup>	51	ml
	C1	Length of the Chord formed for W2:	0.6	mm	0.023	inch
	W2	Fin Volume Component 2:	1269.6	mm <sup>3</sup>	15	mL
0.083	D1	Available Volume:			3.32305	0.000295
2.1 D2		Lateral distance across fin bottom in mm	0.114	inches	(D2+0.031")	0.18956
			0.083	inches		
					Intermediate Terms	
					0.999	0.999
					1.522724	degrees
					0.607453	degrees
					-88.04031	degrees
					11.5062	-0.3937

FIG. 17

6.30 R2  
5.15 R1  
Theta-T  
Theta-B  
382.1 L

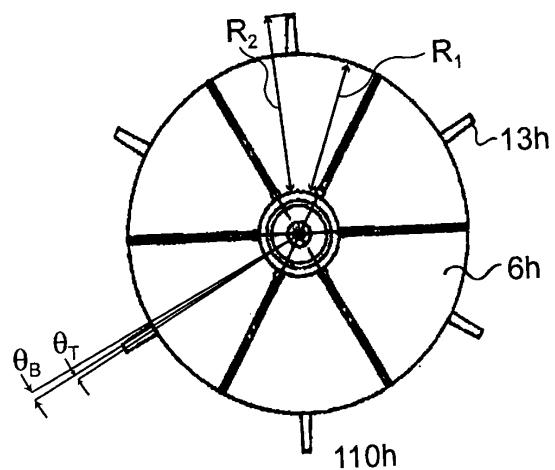
Outer Radius of the Core in mm  
Inner Radius in mm  
Angle formed by one-half the top fin surface in radians  
Angle formed by one-half the bottom fin surface in radians  
Length of the Core in mm

V2	Total volume of the Cylinder:	5227135.7 mm <sup>3</sup>	5227 mL	Outer	Inner
V1	Total volume of the Core trunk:	3561538.0 mm <sup>3</sup>	3562 mL	209714.8	142890.4
W1	Fin Volume Component 1:	66824.5 mm <sup>3</sup>	802 mL		
C1	Length of the Chord formed for W2:	3.4 mm	0.134 inch		
W2	Fin Volume Component 2:	7405.1 mm <sup>3</sup>	89 mL	19.44062	0.060277
D1	Lateral distance across fin bottom in mm	1.327 inches	(D2+0.031")	39.7053	Intermediate Terms
1.296	Lateral distance across fin top in mm	1.296 inches			
1.32.9 D2					
	Calculated Theta-T in radians	0.2621	14.44335 degrees	0.876	
	Calculated (Theta-T+Theta-B) in radians	0.3146	18.02284 degrees	0.809	
	Calculated Theta-B in radians	0.0625	3.579493 degrees		
	Calculated fin Wall Angle in radians	-1.5366	-88.04247 degrees	11.5189	-0.3937

FIG. 18

66.0	R2	Outer Radius of the Core in mm	2.598 inches	5.196	
54.5	R1	Inner Radius in mm	2.145 inches	4.29	
54.5	Theta-T	Angle formed by one-half the top fin surface in radians	0.3626	20.8573877 degrees	
54.5	Theta-B	Angle formed by one-half the bottom fin surface in radians	0.0895	5.14837464 degrees	
382.1	L	Length of the Core in mm			
V2	Total volume of the Cylinder:	5227135.7 mm^3	5227 mL	Outer	Inner
V1	Total volume of the Core trunk:	3563198.9 mm^3	3563 mL	302845.5	206441.7
W1	Fin Volume Component 1:	96403.8 mm^3	1157 mL		
C1	Length of the Chord formed for W2:	4.9 mm	0.193 Inch		
W2	Fin Volume Component 2:	10511.8 mm^3	126 mL	27.69047	0.179394
	Available Volume				
D1	Lateral distance across fin bottom in mm		1.881 inches	(D2+0.031")	
D2	Lateral distance across fin top in mm		1.850 inches		
1.850	Calculated Theta-T in radians	0.3640	20.85739 degrees	0.746	
	Calculated (Theta-T+Theta-B) in radians	0.4539	26.00576 degrees	0.616	
	Calculated Theta-B in radians	0.0899	5.148375 degrees		
	Calculated fin Wall Angle in radians	-1.5366	-88.04031 degrees		
				11.5062	-0.3937

FIG. 19



**FIG. 20**

16.0  
5.5  
R2  
R1  
Theta-T  
Theta-B  
330.5 L

Outer Radius of the Core in mm  
Inner Radius in mm  
Angle formed by one-half the top fin surface in radians  
Angle formed by one-half the bottom fin surface in radians  
Length of the Core in mm

2.593 inches  
2.145 inches  
0.7218 1.25716763 degrees  
0.6802237 degrees  
5205244.4 mm<sup>3</sup>  
3546622.3 mm<sup>3</sup>  
5792.1 mm<sup>3</sup>  
0.6 mm  
1416.9 mm<sup>3</sup>

5205 mL  
3547 mL  
70 mL  
0.025 inch  
17 mL

Outer Inner  
18177.4 12385.27  
0.000414  
3.724271  
0.145 inches  
(D2+0.031")  
0.114 inches  
Intermediate Terms  
0.999  
0.998  
1.257168 degrees  
1.937391 degrees  
0.680224 degrees  
-88.04247 degrees  
11.5189 -0.3937  
Available Volume  
36.320

D1 Lateral distance across fin bottom in mm  
D2 Lateral distance across fin top in mm  
0.114 inches  
0.114  
2.9 D2  
0.0219  
0.0338  
0.0119  
-1.5366  
Calculated Theta-T in radians  
Calculated (Theta-T+Theta-B) in radians  
Calculated Theta-B in radians  
Calculated fin Wall Angle in radians

FIG. 21

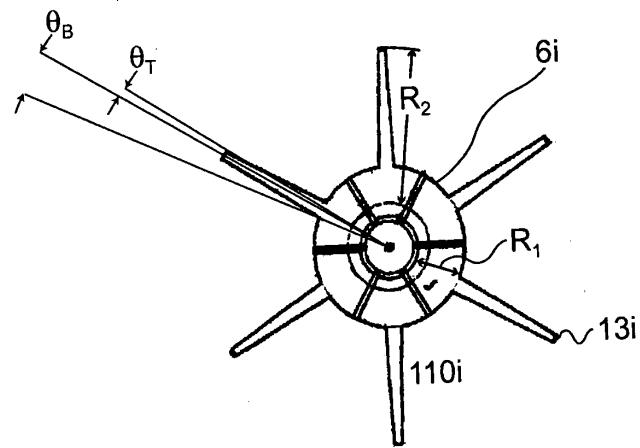
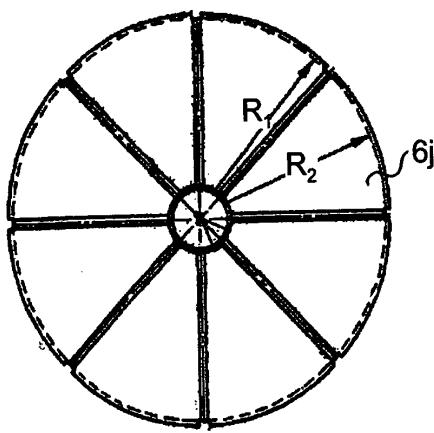


FIG. 22

Outer Radius of the Core in mm  
Inner Radius in mm  
Angle formed by one-half the top fin surface in radians  
Angle formed by one-half the bottom fin surface in radians  
Length of the Core in mm

R2	Outer Radius of the Core in mm Inner Radius in mm Angle formed by one-half the top fin surface in radians Angle formed by one-half the bottom fin surface in radians Length of the Core in mm	2.598 1.052 1.2461381 degrees 7.30918223 degrees 382.1
V2	Total volume of the Cylinder: Total volume of the Core trunk: Fin Volume Component 1: Length of the Chord formed for W2: Fin Volume Component 2:	5227135.7 mm <sup>3</sup> 857071.3 mm <sup>3</sup> 15127.0 mm <sup>3</sup> 3.4 mm 25506.7 mm <sup>3</sup>
V1	Available Volume	5227 mL 857 mL 182 mL 0.134 inch 306 mL
W1	D1	0.313 inches (D2+0.031")
C1	D2	0.113 inches 7.9602
W2	D1	Lateral distance across fin bottom in mm Lateral distance across fin top in mm
		0.0217 0.1493 0.1276 -1.5062
		1.246138 degrees 8.55532 degrees 7.309182 degrees -86.29909 degrees
		0.999 0.956 39.2684 -2.54
		Intermediate Terms

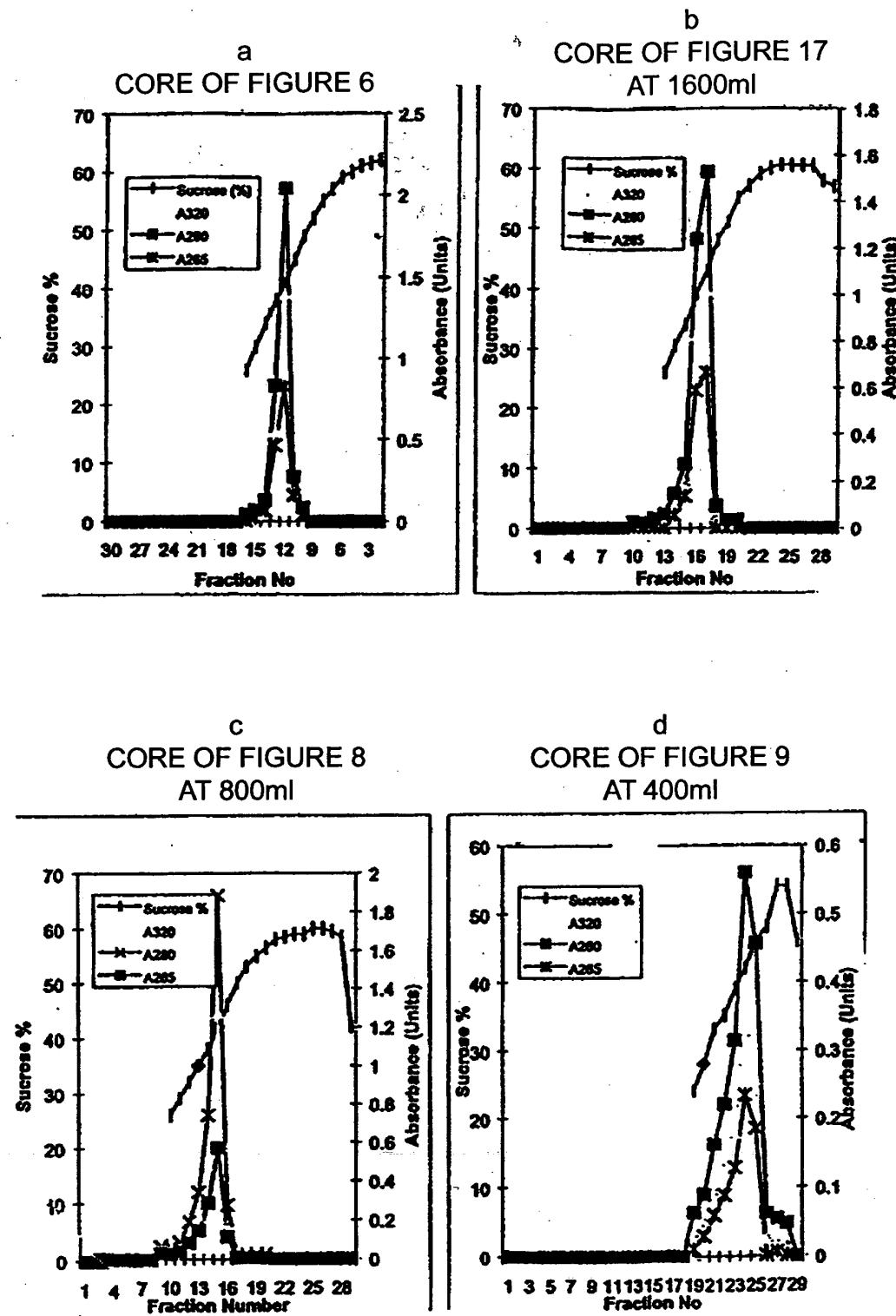
FIG. 23



**FIG. 24**

66.0	R2	Outer Radius of the Core in mm	2.598	inches	
65.0	R1	Inner Radius in mm	2.561	inches	
	Theta-T	Angle formed by one-half the top fin surface in radians	0.0000		0 degrees
	Theta-B	Angle formed by one-half the bottom fin surface in radians	0.0000		0 degrees
382.1	L	Length of the Core in mm			
	V2	Total volume of the Cylinder:	5227135.7	mm <sup>3</sup>	5227 mL
	V1	Total volume of the Core trunk:	5079309.0	mm <sup>3</sup>	5079 mL
	W1	Fin Volume Component 1:	0.0	mm <sup>3</sup>	0 mL
	C1	Length of the Chord formed for W2:	0.0	mm	0.000 inch
	W2	Fin Volume Component 2:	0.0	mm <sup>3</sup>	0 mL
	D1	Lateral distance across fin bottom in mm	0.000	inches	(D2+0.031")
0.0	D2	Lateral distance across fin top in mm	0.000	inches	0.0000
					Intermediate Terms
		Calculated Theta-T in radians	0.0000		0 degrees
		Calculated (Theta-T+Theta-B) in radians	0.0000		0 degrees
		Calculated Theta-B in radians	0.0000		0 degrees
		Calculated fin Wall Angle in radians	#DIV/0!		#DIV/0!
					0.9398

FIG. 25



**FIG. 26.**